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(54) METHOD AND SYSTEM FOR EMERGENCY RESPONSE

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a method and system that can quickly and efficiently cope with the occurrence of emergency, without increasing number of operators in a supervisory center by solving the problem of a conventional method and system, where an operator spends all his time on one user at emergency and cannot cope with other emergency reports.

SOLUTION: This system provides the method and system for coping with emergency, in which when the supervisory center receives an emergency notice from a mounted terminal 1a, an emergency coping means 21 selects any of

other mounted terminals 1b-1f in the vicinity of the mounted terminal 1a, makes a call to the selected terminal, a PHS system 3 connects the mounted terminal 1a to the selected terminal among the mounted terminals 1b-1f by a multi-party simultaneous speech channel and a user of the selected terminal, on behalf of the operator makes a conversation with the user of the mounted terminal 1a making the emergency notice, so as to of encouraging the user of the mounted terminal 1a.

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**CLAIMS**

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[Claim(s)]

[Claim 1] The urgent correspondence approach characterized by supervising the positional information of two or more terminals which acquire a user's living body data, choosing another terminal which is near said terminal based on the positional information of said terminal when the emergency call which shows that abnormalities were in living body data from said one of terminals is received, and carrying out the line connection of said terminal which called in emergency dial and said selected terminal.

[Claim 2] The urgent correspondence approach which supervises the positional

information of two or more terminals which acquire a user's living body data, makes the multiple selection of another terminal which is near said terminal based on the positional information of said terminal when the emergency call which shows that abnormalities were in living body data from one of said terminals is received, and is characterized by to connect said terminal which called in emergency dial and two or more of said selected terminals in a \*\* person coincidence line of contact.

[Claim 3] It is the urgent correspondence system equipped with the monitor center connected through the terminal which acquires a user's living body data, said terminal, a PHS line network, or a cellular-phone line network. When abnormalities are in the living body data which said terminal acquired, it is the terminal which calls said monitor center in emergency dial through said PHS line network or a cellular-phone line network. If said monitor center supervises the positional information of two or more of said terminals and receives said emergency call from said one of terminals Based on the positional information of said terminal, the multiple selection of another terminal which is near said terminal is made. It is the monitor center which outputs the demand which connects said terminal which called in emergency dial and said two or more selected terminals in a \*\* person coincidence line of contact to said PHS line network or a cellular-phone line network. The urgent correspondence system

characterized by being the PHS line network or cellular-phone line network to which it will connect said terminal which called in emergency dial and said two or more selected terminals in a \*\* person coincidence line of contact if said PHS line network or a cellular-phone line network receives said demand from said monitor center.

[Claim 4] If a monitor center receives an emergency call, it is based on the positional information of said terminal. It is the monitor center which outputs the demand which makes the multiple selection of another terminal which is near said terminal, and connects said terminal which called in emergency dial, said two or more selected terminals, and monitor center in a \*\* person coincidence line of contact to a PHS line network or a cellular-phone line network. If said PHS line network or a cellular-phone line network receives said demand from said monitor center The urgent correspondence system according to claim 3 characterized by being the PHS line network or cellular-phone line network which connects said terminal which called in emergency dial, said two or more selected terminals, and said monitor center in a \*\* person coincidence line of contact.

[Claim 5] The urgent correspondence system according to claim 3 or 4 by which a terminal is characterized by having the 1st carbon button which carries out call origination of the monitor center, the 2nd carbon button which carries out call

origination of the family in a configuration smaller than said 1st carbon button, and the 3rd carbon button which carries out call origination of the family doctor in a configuration smaller than said 1st carbon button.

[Claim 6] The urgent correspondence system according to claim 3 to 5 characterized by for a terminal being a terminal which sends a beacon signal and being a PHS line network or a cellular-phone line network equipped with the location management tool which a PHS line network or a cellular-phone line network outputs to a monitor center by making into positional information the base station which pinpoints the location of said terminal with the direction and field strength of said beacon signal, and the location pinpointed in said base station.

[Claim 7] The urgent correspondence system according to claim 3 to 6 characterized by being the terminal which asks for the stress level which a terminal is equipped with a means to measure the frequency of a voiceprint, and shows extent of stress based on frequency change of the measured voiceprint, and transmits said stress level to a monitor center with living body data.

[Claim 8] It is the urgent correspondence system equipped with the monitor center connected through the terminal which acquires a user's living body data, said terminal, a PHS line network, or a cellular-phone line network. It asks for the stress level which said terminal is equipped with a means to measure the

frequency of a voiceprint, and shows extent of stress based on frequency change of the measured voiceprint. It is the terminal which transmits periodically said living body data and said stress level to said monitor center. Said monitor center memorizes as a database the living body data and the stress level which were received for every terminal. The urgent correspondence system characterized by being the monitor center which draws the life rhythm of the user of said terminal based on said database, compares with said life rhythm the living body data and the stress level which were newly received, and predicts emergency generating by condition change of said user.

[Claim 9] The urgent correspondence system according to claim 3 to 8 by which a terminal is characterized by being the terminal which acquires blood pressure, a pulse, a pulse wave, an electrocardiogram, SPO<sub>2</sub>, and temperature as living body data.

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## DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the urgent correspondence

approach and urgent correspondence system which can perform quick and efficient correspondence, without starting the urgent correspondence approach and urgent correspondence system using the terminal which acquires a wearing person's living body data, especially increasing the number of the operators corresponding to emergency.

[0002]

[Description of the Prior Art] The urgent correspondence system which used the PHS system etc. from the former is devised. As an urgent correspondence system for an old man etc., the old man who is a user carried the terminal (wearing terminal) of a telephone or a wristband mold, when the depression of the specific carbon button beforehand set as emergency was carried out, call origination was automatically carried out to the monitor center through the PHS circuit, and there were some which succeed in an emergency call quickly.

[0003] In this system, using the location registration information on a PHS system, in a monitor center, the location of a terminal is always supervised, the location of a terminal, i.e., a wearing person's location, is attached in emergency, and emergency systems, such as a fire department and the police, are notified.

[0004] moreover, as another conventional urgent correspondence system If a wearing terminal acquires living body data, such as a wearing person's temperature, blood pressure, and a heart rate, it transmits to a monitor center

periodically in a PHS circuit, the location and living body data of each terminal are supervised in the monitor center and abnormalities are in the received living body data. There were some which an operator notifies to the hospital beforehand registered corresponding to the terminal or an emergency system with a wearing person's location.

[0005] After a monitor central site operator notifies an emergency system in emergency, it is required for [ until an ambulance etc. reaches a wearing person's origin ] several minutes to continue encouraging to telephone to a wearing person through a wearing terminal, in order to grasp a patient's condition to accuracy more, to stabilize a feeling, and to encourage in such a conventional urgent correspondence system.

[0006]

[Problem(s) to be Solved by the Invention] However, in the above-mentioned conventional urgent correspondence system, since a monitor central site operator became devoted to one user in emergency and was not able to respond to another emergency call, he had to increase an operator's number and had the trouble that system-wide cost will increase.

[0007] In view of the above-mentioned actual condition, it succeeded in this invention, and it aims at offering the urgent correspondence approach and urgent correspondence system which can respond to emergency quickly and

efficiently, without increasing an operator's number.

[0008]

[Means for Solving the Problem] This invention for solving the trouble of the above-mentioned conventional example If the emergency call which shows that the positional information of two or more terminals which acquire a user's living body data was supervised, and abnormalities were in living body data from one of terminals is received With the user whom chooses another terminal which is near the terminal concerned, and makes the terminal which called in emergency dial, and the selected terminal the urgent correspondence approach which carries out a line connection based on the positional information of the terminal concerned, and emergency generated By talking so that another user connected until it could connect another user who is present in near and the ambulance arrived may encourage the user who lapsed into emergency There is no need that a monitor central site operator talks by being devoted to one user, correspondence of another emergency call can be carried out, and quick and efficient correspondence can be performed by low cost, without increasing the number of operators.

[0009] Moreover, if the emergency call which shows that this invention supervised the positional information of two or more terminals which acquire a user's living body data, and abnormalities were in living body data from one of

terminals is received Based on the positional information of the terminal concerned, the multiple selection of another terminal which is near the terminal concerned is made. The terminal which called in emergency dial, and two or more selected terminals are made into the urgent correspondence approach which connects in a \*\* person coincidence line of contact, the probability for the selected terminal to be connected can be raised, and possibility of performing efficient correspondence can be raised.

[0010] Moreover, this invention is the urgent correspondence system equipped with the monitor center connected through the terminal which acquires a user's living body data, a terminal, a PHS line network, or a cellular-phone line network. When abnormalities are in the living body data which the terminal acquired, it is the terminal which calls a monitor center in emergency dial through a PHS line network or a cellular-phone line network. If a monitor center supervises the positional information of two or more terminals and receives an emergency call from one of terminals Based on the positional information of a terminal, the multiple selection of another terminal which is near the terminal concerned is made. It is the monitor center which outputs the demand which connects the terminal which called in emergency dial to the PHS line network or the cellular-phone line network, and two or more selected terminals in a \*\* person coincidence line of contact. If a PHS line network or a cellular-phone line

network receives the demand from a monitor center With the user whom is using the terminal which called in emergency dial, and two or more selected terminals as the urgent correspondence system which is the PHS line network or cellular-phone line network connected in a \*\* person coincidence line of contact, and emergency generated By talking so that another user connected until it could connect another user who is present in near and the ambulance arrived may encourage the user who lapsed into emergency There is no need that a monitor central site operator talks by being devoted to one user, correspondence of another emergency call can be carried out, and quick and efficient correspondence can be performed by low cost, without increasing the number of operators.

[0011] Moreover, this invention is based on the positional information of the terminal concerned, if a monitor center receives an emergency call. It is the monitor center which outputs the demand which connects the terminal which made the multiple selection of another terminal which is near the terminal concerned, and called in emergency dial to the PHS line network or the cellular-phone line network, two or more selected terminals, and a monitor center in a \*\* person coincidence line of contact. If a PHS line network or a cellular-phone line network receives the demand concerned from a monitor center It is considering as the urgent correspondence system which is the PHS

line network or cellular-phone line network which connects the terminal which called in emergency dial, two or more selected terminals, and a monitor center in a \*\* person coincidence line of contact. If there is need, a monitor central site operator can also join a \*\* person coincidence message, and when the condition of the user who lapsed into emergency changes, it can respond promptly.

[0012] moreover , this invention ask for the stress level which a terminal be equip with a means measure the frequency of a voiceprint , and show the extent of stress based on frequency change of the measured voiceprint , be use that it be the terminal which transmit a stress level to a monitor center with living body data as the urgent correspondence system by which it be characterize , can also offer the data in which the state of stress of the user who lapsed into emergency be show , and support the thing with still more suitable operator and medical practitioner which judge and direct .

[0013] Moreover, this invention is the urgent correspondence system equipped with the monitor center connected through the terminal which acquires a user's living body data, the terminal concerned, a PHS line network, or a cellular-phone line network. It asks for the stress level which a terminal is equipped with a means to measure the frequency of a voiceprint, and shows extent of stress based on frequency change of the measured voiceprint. It is the terminal which transmits living body data and a stress level to a monitor center periodically. A

monitor center memorizes as a database the living body data and the stress level which were received for every terminal. Based on a database, draw the life rhythm of the user of the terminal concerned, and the living body data and stress level, and life rhythm which newly received are compared. It is considering as the urgent correspondence system which is the monitor center which predicts emergency generating by condition change of the user concerned. Living body data and a stress level can be supervised and it can ask for a user's life rhythm, before comparing the life rhythm and received data, predicting condition change of a user and lapsing into a serious state of emergency, suitable measures can be taken, and emergency can be prevented.

[0014]

[Embodiment of the Invention] It explains referring to a drawing about the gestalt of operation of this invention. The urgent correspondence approach and urgent correspondence system concerning the gestalt of operation of this invention If an emergency call is received from a wearing terminal in the monitor center, while an operator will notify an emergency system Another wearing terminal which requires an urgent correspondence means for the place nearest to the wearing terminal concerned is chosen. Since the demand which connects the wearing terminal concerned and the selected terminal by the \*\* person coincidence line of contact of a PHS system is outputted and he is trying for a PHS system to

connect them by the \*\* person coincidence line of contact Voice can be spoken and encouraged to the wearing person who lapsed into emergency instead of the user of a wearing terminal called until the ambulance arrived being an operator. The user who the operator could respond to another emergency call in the meantime, and could respond to emergency quickly and efficiently, without increasing the number of operators, and was connected by the \*\* person coincidence line of contact can learn the correspondence in emergency himself.

[0015] First, the urgent correspondence structure of a system concerning this invention is explained using drawing 1 . Drawing 1 is the outline block diagram of the urgent correspondence system concerning this invention. As shown in drawing 1 , the urgent correspondence system of this invention is the same as the conventional urgent correspondence system fundamentally, and consists of monitor centers 2 which receive and supervise the data from the wearing terminal 1 which users, such as an old man, carry, and each wearing terminal 1. Furthermore, the monitor center 2 is connectable with the emergency engine of a fire department 4, a police station 5, the care exchange pin center, large 6, and emergency hospital 7 grade through a line network (not shown). Moreover, the probe 8 which looks for the wearing terminal 1 is carried in the ambulance. In addition, the "terminal" indicated to the claim is equivalent to the wearing terminal 1, and a "PHS line network" is equivalent to the PHS system 3.

[0016] And the wearing terminal 1 and the monitor center 2 perform transmission and reception and a message of data through the PHS system 3. Moreover, a means to realize \*\* person coincidence message service is formed in the PHS system 3. In addition, although the PHS system is used as migration communication system here, you may be a cellular-phone system.

[0017] Each component is explained concretely. The wearing terminal 1 is a terminal which can be learned easily, and a user measures the living body data of the users (old man etc.) putting on the wearing terminal 1, and transmits it to the monitor center 2.

[0018] As living body data which the wearing terminal 1 measures, if it is the normal range where it is a blood-pressure value, a heart rate, a pulse, a pulse wave, electrocardio, temperature, SPO2 (arterial oxygen saturation), etc., and the measured data are set up, about one transmission /of a day will be performed, but normal range outside, if it is outlying observation, the monitor center 2 will be immediately called in emergency dial by attaching living body data.

[0019] Moreover, the wearing terminal 1 of this system is equipped with the function which sends a beacon signal in order to raise the precision of location specification.

[0020] The wearing terminal 1 transmits living body data to the monitor center 2,

or is equipped with the communication facility which telephones to the operator of the monitor center 2. Even if communication facility is built in the terminal and it is external, it is not cared about. Moreover, it is more desirable if coincidence is equipped with the means in which two line connections are possible. Moreover, the wearing terminal 1 can always consider a wearing type wrist watch type, the type with which a lug is equipped like hearing aid, or an abdomen belt type.

[0021] The monitor center 2 was equipped with the urgent correspondence means 21 which corresponds emergency, and is equipped with the living body data received for every user from basic information, such as address and name and a family doctor, and the wearing terminal 1, and the database 22 which memorizes the positional information of each wearing terminal 1 transmitted from the location management tool of the PHS system 3.

[0022] And like the conventional system, when an emergency call is received from the wearing terminal 1, the operator of the monitor center 2 attaches the positional information of the wearing terminal 1 concerned, and notifies a hospital, a fire department, etc.

[0023] Moreover, the urgent correspondence means 21 which is this system feature part Start, if the emergency call from the wearing terminal 1 is received and an operator succeeds in specific actuation (call directions), and the positional information memorized in the database 22 is searched. The multiple

selection of two or more another wearing terminals 1 which are present in the location nearest to the wearing terminal 1 which transmitted the emergency call is made, and it requires of \*\* person coincidence message service of the PHS system 3 so that the wearing terminal 1 and two or more another wearing terminals 1 which emergency generated may be connected by the \*\* person coincidence line of contact.

[0024] The example of the approach of a \*\*\*\* coincidence message is explained concretely. For example, the urgent correspondence means 21 registers two or more groups who perform a \*\* person coincidence message by the specific number beforehand to \*\* person coincidence message service of a PHS system, and the circuit of groups involved has become an opening usually.

[0025] And if an emergency call is received, the urgent correspondence means 21 will be required of the PHS system 3 so that call origination may be carried out to two or more wearing terminals 1 chosen based on positional information and the line connection of what carried out off-hook, and the wearing terminal 1 which has called in emergency dial may be carried out as the same group constituent. As for assignment of a group, the urgent correspondence means 21 assigns the group of idle status one by one.

[0026] In the example of drawing 1 , if the urgent correspondence means 21 receives the emergency call from wearing terminal 1a, it will require that the

thing which chooses and carries out call origination of another wearing terminals 1b-1f which are near the wearing terminal 1a based on positional information and by which off-hook [ of / of the wearing terminals 1b-1f ] was carried out to wearing terminal 1a to the PHS system 3 should be connected to a specific group, for example. And if these terminals are connected, a \*\* person coincidence message will be attained.

[0027] Moreover, the PHS system 3 connects the specified wearing terminal 1 by the \*\* person coincidence line of contact as a specified group constituent according to the demand from the urgent correspondence means 21 of the monitor center 2.

[0028] Thereby, the user of the other wearing terminals 1 connected by the \*\* person coincidence line of contact and the message of the user who lapsed into emergency are attained. In addition, although two or more wearing terminals 1 are chosen and the probability by which off-hook is carried out is raised, you may not necessarily be plural here.

[0029] And by making it have the user who lapsed into emergency from the other wearing terminals [ 1b-1f ] wearing person do voice credit of encouragement until an ambulance etc. arrives, without being bound only to one user, the correspondence of the operator of the monitor center 2 in other emergency calls does not need to be attained, and he does not need to increase the number of

operators.

[0030] Here, the urgent correspondence means 21 once cuts the circuit to which wearing terminal 1a was connected at the time of an emergency call when two line connections were not possible to coincidence, and outputs the demand anew connected to a \*\* person coincidence line of contact.

[0031] In this case, by carrying out the demand connected to a \*\* person coincidence message demand also including self (monitor center 2), the wearing terminal 1 which emergency generated, the selected wearing terminal 1, and the monitor center 2 are connected as the same group, and the operator of the monitor center 2 can also participate in conversation, and can respond to change of a condition promptly.

[0032] Or if the emergency call from wearing terminal 1a is received and the urgent correspondence means 21 starts with the call directions by the operator, it will require of the PHS system 3 and a group message will be started by the group configuration number 2 so that wearing terminal 1a which assigned the group of idle status immediately and called in emergency dial, and the monitor center 2 may be considered as a \*\* person coincidence message. Then, requiring the PHS system 3 to put into groups involved is also considered about that which chose and carried out call origination of the wearing terminal 1 which searches a database 22 based on positional information, and is present in near,

and carried out off-hook. This approach is realizable even if two line connections are not possible for the wearing terminal 1 to coincidence.

[0033] Moreover, if it is the terminal in which two line connections are possible to coincidence, it is possible to hit to the message with the monitor center 2 to which one circuit was connected at the time of an emergency call, and to hit other one circuit to a \*\* person coincidence line of contact. Even while the selected user is making voice credit the user who lapsed into emergency, an operator can talk by another circuit, and a prompt action can be performed when the condition of the user who lapsed into emergency changes.

[0034] In any case, it succeeds in accounting about a \*\* person coincidence message to the monitor center 2.

[0035] Next, the urgent correspondence approach (this approach) concerning the gestalt of operation of this invention is concretely explained using drawing 1 . Here, it explains as that by which the wearing terminal 1 does not connect two circuits to coincidence. First, in the urgent correspondence system of drawing 1 , the positional information for every wearing terminal transmitted from the location management tool of the living body data transmitted from each wearing terminals 1a-1j and a PHS system is memorized in the database 22 of the monitor center 2.

[0036] In addition, in this system, the location of the wearing terminal 1 is

pinpointed by equipping the wearing terminal 1 with the dispatch function of a beacon signal, searching for the direction of the wearing terminal 1 which is a source of dispatch from the beacon signal received in the base station, and finding distance from the field strength of a signal further. Thereby, it becomes possible to raise a specific precision sharply compared with the location specification by the trigonometry in the conventional PHS system. And a location management tool outputs the location pinpointed in the base station to the monitor center 2 as positional information. He is trying to display the positional information of each received terminal on a map in the monitor center.

[0037] Moreover, the probe 8 which receives the beacon signal from the wearing terminal 1, and pinpoints a location based on field strength and a direction is carried in the ambulance, and it enables it to arrive at the place of the target wearing terminal 1 quickly by emergency in this system.

[0038] And if abnormalities occur to the old man who has equipped with wearing terminal 1a, for example and wearing terminal 1a detects the abnormalities of living body data, wearing terminal 1a will give living body data to the monitor center 2 immediately, and will transmit an emergency call.

[0039] If an emergency call is received in the monitor center 2, off-hook [ of the received living body data ] will be memorized and carried out to a database 22, and it will be in a talk state. An operator performs voice credit "whether what is

the matter" through a PHS circuit, holds the user and conversation equipped with wearing terminal 1a, checks the existence of consciousness, and the condition of living body data, and notifies a hospital, a fire department, the police, etc. according to a condition. In that case, an operator looks at the positional information currently displayed on the panel etc., checks the location of wearing terminal 1a, and also tells a location.

[0040] And the condition of the user of wearing terminal 1a who called in emergency dial when an emergency call is a false report finishes a message as it is, when communication in a hospital and arrangements of an ambulance are not much bad unnecessary.

[0041] However, when a user's symptom is not good, an operator performs an emergency report to a fire department etc. while performing the report which transmits living body data to a hospital and tells emergency. And in addition to a report, an operator inputs the specific call directions which call another wearing terminal 1 which is near the wearing terminal 1a from a control unit (not shown) as a description of this approach.

[0042] If call directions are inputted, the urgent correspondence means 21 is started, a database 22 will be searched, the positional information of wearing terminal 1a which called in emergency dial will be checked, and call origination of the number of two or more of other wearing terminals 1 which are near the

location concerned will be read and carried out. The circuit with wearing terminal 1a connected at the time of an emergency call on that occasion cuts.

[0043] And it is required that the wearing terminal (plurality) 1 by which the line connection was carried out by carrying out off-hook among other wearing terminals 1 which carried out call origination previously, wearing terminal 1a of emergency, and the monitor center 2 should be connected to the same group for a \*\* person coincidence message to \*\* person coincidence message service of the PHS system 3. Although the number of the wearing terminal 1 to call is set up beforehand, it is taken as what can be suitably changed within a group constituent's limit count.

[0044] In the example of drawing 1 , call origination of the wearing terminals 1b-1f is chosen and carried out as a wearing terminal 1 which is near the wearing terminal 1a, and a \*\* person coincidence message is required of the PHS system 3. This connects wearing terminal 1a which lapsed into emergency, the thing which carried out off-hook among the selected wearing terminals 1b-1f, and the monitor center 2 by the \*\* person coincidence line of contact as the same group's constituent with \*\* person coincidence message service of the PHS system 3.

[0045] In case the urgent correspondence means 21 carries out call origination to other wearing terminals 1, you may make it output the message "encourage

since Mr. OO has waited for the ambulance" to the user who did off-hook. Moreover, by the pneuma of mutual help, when emergency arises to each user at the time of registration, even if it is strange others, it explains that I have a suitable conversation carried out to him.

[0046] If wearing terminal 1a of emergency, two or more wearing terminals [ 1b-1f ] either, and the monitor center 2 are connected by the \*\* person coincidence line of contact, a wearing terminals [ 1b-1f ] user will encourage the user of wearing terminal 1a which lapsed into emergency, and he will talk so that it may encourage.

[0047] Thereby, when there is an emergency call from wearing terminal 1a, if he performs the report to early circumstantial judgment and an early hospital, a fire department, etc., the operator of the monitor center 2 can leave the conversation of encouragement to the user of two or more wearing terminals 1 chose by the urgent correspondence means 21 after that, an operator does not need to become devoted to one user and the efficient employment of a system of him will be attain. Moreover, the user of the wearing terminal by which the line connection was carried out to the user who lapsed into emergency can also learn the correspondence in emergency himself.

[0048] Moreover, a prompt action is attained also when the condition of the user who lapsed into emergency changes suddenly, since the monitor center 2 also

enables it to participate in a \*\* person coincidence message if there is need.

[0049] Moreover, if the wearing terminal 1 is possible for two line connections to coincidence independently, as mentioned above, without cutting the circuit of wearing terminal 1a in the case of an emergency call, and the monitor center 2, it is made to connect with a \*\* person coincidence line of contact by the circuit of another side, and, as for this, the urgent correspondence means 21 should just carry out the demand to which wearing terminal 1 comrades are connected by the \*\* person coincidence line of contact.

[0050] Thereby, in wearing terminal 1a which emergency generated, since the circuit with an operator is also held while another circuit can be connected to a \*\* person coincidence line of contact where the circuit connected previously is held, and being able to hear the voice of encouragement by the user of other wearing terminals 1, also when a condition changes suddenly, an operator can perform a prompt action.

[0051] Furthermore, also in the hospital, it has the terminal connectable with a \*\* person coincidence line of contact, and the medical practitioner who received the emergency call when outputting the demand whose urgent correspondence means 21 also connects the terminal of a hospital to a \*\* person coincidence line of contact also becomes possible [ participating in a \*\* person coincidence message ], and a medical practitioner can perform decision and directions based

on the conversation of the living body data transmitted from the monitor center 2, and a patient. And by doing in this way, the need of stationing a medical practitioner permanently at the monitor center 2 is lost, and the cost of system management can be reduced sharply.

[0052] According to the urgent correspondence approach and urgent correspondence system concerning the gestalt of operation of this invention If wearing terminal 1a acquires a user's living body data, an emergency call will be transmitted to the monitor center 2 if it is outlying observation, and an emergency call is received in the monitor center 2 If an operator judges that it telephones to the user of wearing terminal 1a, a condition is checked, and it is emergency If a hospital and a fire department are notified with the location of the wearing terminal 1a concerned and specific call directions are inputted, the urgent correspondence means 21 will start. Choose and carry out call origination of two or more another wearing terminals 1b-1f which are near the wearing terminal 1a, and the PHS system 3 is received. Since he is trying connecting what carried out off-hook in another wearing terminals 1b-1f of the plurality concerned, and wearing terminal 1a of emergency by the \*\* person coincidence line of contact, and to output a demand Until it reaches the origin of the user by whom the ambulance lapsed into emergency other wearing terminals [ 1b-1f ] one of users It can talk so that the user of emergency may be calmed down

instead of an operator and it may encourage. An operator is effective in the ability to respond to emergency quickly and appropriately, without increasing cost, without being able to respond also to another emergency call, without being monopolized by only one user, and increasing the number of operators.

[0053] Moreover, when making it include the monitor center 2 in a \*\* person coincidence message and the condition of the user who lapsed into emergency changes since it can participate in conversation when a monitor central site operator is also required, it is effective in the ability to respond promptly.

[0054] Moreover, when using for coincidence the thing which can connect two circuits as a wearing terminal 1, where the circuit connected with the monitor center 2 at the time of an emergency call is held, the same effectiveness will be acquired if it connects with a \*\* person coincidence line of contact by another circuit.

[0055] Moreover, according to this approach and this system, since he is trying to call two or more wearing terminals 1 as other wearing terminals 1, the user of any one set of the wearing terminal 1 has the high possibility in which conversation is possible, and is effective in the ability to ensure conversation of encouragement. [ at least ]

[0056] Moreover, since another wearing terminal 1 in which the urgent correspondence means 21 is near the wearing terminal 1 which has called in

emergency dial is chosen and he is trying to call by \*\* person coincidence message according to this approach and this system It is also possible to do the auxiliary activity of doing the urgent lifesaving activity of artificial respiration, a cardiac massage, etc. before an ambulance will arrive if needed, if the called user of another wearing terminal 1 can also go to a site and there is knowledge, or loosening clothes.

[0057] Furthermore, also to the user chosen as a conversation partner, by corresponding emergency, the attention over health is called and there is effectiveness it is ineffective by the chance to improve its own health care.

[0058] The terminal of a hospital is connected in a \*\* person coincidence line of contact, and the medical practitioner who received the emergency call can participate in a \*\* person coincidence message. Moreover, a medical practitioner Decision and directions can be performed based on the conversation of the living body data transmitted from the monitor center 2, and a patient, the user of other wearing terminals can do a suitable lifesaving activity according to directions of a medical practitioner, and there is effectiveness which can decrease the case where a sequela comes out or it causes death.

[0059] Moreover, since the dispatch function of a beacon signal is prepared in the wearing terminal 1 and he is trying to pinpoint the location of the wearing terminal 1 in quest of the direction and distance of the source of dispatch by

receiving a beacon signal in a base station according to this system. The precision of location specification can be raised sharply, the rescue time amount in emergency can be shortened, and there is effectiveness which can decrease the case where a sequela comes out or it causes death after rescue. Moreover, when the precision of location specification went up, it can apply also to the time of going out of an ordinary old person, and a wandering old man, and convenience can be improved.

[0060] By carrying in the ambulance etc. the probe 8 which receives the beacon signal from the wearing terminal 1, and searches the location of the wearing terminal 1 from field strength and a direction again, furthermore, an ambulance If the monitor center 2 is mobilized based on the positional information acquired from the location management tool and comes near the destination, it can look for the wearing terminal 1 which called in emergency dial with the probe 8, and it is effective in the ability to arrive early by the place of the wearing terminal 1 which lapsed into emergency.

[0061] Furthermore, it is also possible to prepare the push button for urgent which the wearing person itself operates to a wearing terminal. If the push button for urgent is pushed, call origination of the wearing terminal will be carried out to addressing to a number of the specification set up beforehand. Thereby, when the wearing person itself senses the abnormalities of condition, it is effective in

the ability to perform an emergency call by oneself.

[0062] Three push buttons for urgent are prepared in this case, and it is possible to assign a connection place to condition, such as what calls an urgent monitor center, a thing which calls a family, and a thing which calls a family doctor. Furthermore, two are effective in being easy to identify the carbon button for urgent communication, if the carbon button for a trauma center call is enlarged, and others are small and it carries out.

[0063] Moreover, by registering with the PHS system beforehand as three places which mentioned the connection place of an emergency call above, in carrying out call origination to these connection places, there is effectiveness which can be managed with a tariff cheaper than the usual phonecall charges.

[0064] Furthermore, the voiceprint analysis means of receiving voice is formed in a wearing terminal and the monitor center 2, and judging the state of stress by change of the voiceprint of receiving voice is also considered again. This judges a candidate's state of stress by [ of a candidate ] usually memorizing the frequency of the voiceprint at the time and usually comparing the frequency of the voiceprint at the time, and the voiceprint at the time of an actual conversation. Generally, at the time of stress, the frequency of a voiceprint becomes large.

[0065] For example, when old people living alone's separation family holds conversation with an old man using the wearing terminal concerned, the

voiceprint at the time of usual [ old ] is beforehand registered into a family's wearing terminal. And at the time of the message with an old man, an old voiceprint frequency is measured talking, the gap with the voiceprint frequency registered beforehand is detected, and a phase judging is carried out, using extent of a state of stress as a stress level.

[0066] And when a wearing terminal reports a stress level by display etc., a family is effective in the ability to perform correspondence of lengthening conversation time if it was seen and old stress has built, or bringing a meeting forward.

[0067] If the illustration of an apple is displayed and a stress level becomes high as an example of a display of a stress level, an apple is gnawed, it is missing and a display called going can be considered, and there is effectiveness which can display a stress level intelligibly. In the condition that a stress level is the worst, it is also considered that become a small point and a display and voice report emergency.

[0068] Moreover, if a user's own voiceprint of a wearing terminal is registered, with living body data, stress data, such as a stress level, can be acquired and it can transmit to the monitor center 2. Moreover, he can also supervise his state of stress objective, and has the effectiveness whose self-control becomes possible.

[0069] Moreover, the about a patient's symptom rather than [ if the monitor center 2 notifies stress data to a hospital with living body data at the time of the report from the wearing terminal 1 ] thing for which a medical practitioner is provided with many decision ingredients becomes possible, the triple check of a patient's voice, living body data, and stress data can also be performed, and it is effective in the ability to make a more suitable judgment.

[0070] Furthermore, it also becomes possible by putting each user's living body data, and the stress data based on voiceprint analysis in a database in the monitor center 2, and analyzing data to foreknow emergency in advance.

[0071] For example, when excited, stress's becoming high and temperature and blood pressure also rising is generally known. By digitizing based on stress data or living body data, analyzing this statistically, and calculating an inclination value, the preliminary tremor in emergency can be caught and there is effectiveness it is ineffective to it being possible to prevent serious emergency.

[0072] Specifically based on the database which memorized living body data and stress data, suitable treatment of drawing each user's life rhythm, emitting warning from turbulence of the rhythm to a user's wearing terminal, or predicting generating of emergency and reporting to a hospital or an emergency engine is enabled.

[0073] Since there is fluctuation, as long as allowances are in the memory

capacity in a center, you may make it compute normal by holding several year minute data also according to a season, although a life rhythm is usually memorized as a rhythm of 1 day by day, for example, being considered as criteria in quest of the average for the past several months.

[0074] Before a user falls by this, by the ability warning or arranging an ambulance etc. to a user, so that movement excessive, for example may be stopped, early treatment can become possible or it can prevent a user lapsing into a fatal symptom, and there is effectiveness it is ineffective also to using for prevention further being possible.

[0075] Moreover, if a business manager carries the wearing terminal concerned, voiceprint analysis of a visitor is performed at the time of conversation with a visitor, and it considers as the ingredient at the time of judging whether there is any hope of sale, and is effective in the ability to use for a marketing strategy.

[0076] furthermore, strep and Chloe -- mutual -- a wearing terminal -- equipping -- "-- it loves -- judging the stress in conversation of ?" and "loving" -- truth -- like -- there is effectiveness which plays and makes the sensational usage possible of checking.

[0077] As a terminal used by the urgent correspondence system concerning the gestalt of operation of this invention The terminal which equipped a usual PHS function or a usual cellular-phone function with the stress sensor which acquires

stress data, and the push button function (2kA mold), A pulse, a pulse wave, an electrocardiogram, the terminal (2KB mold) that formed the sensor of temperature, the terminal (2KC molds) which formed the blood-pressure sensor in the function of 2kA mold, and the terminal (2KD molds) equipped with all the functions of the function of 2kA mold, 2KB mold, and 2KC molds are in the function of 2kA mold.

[0078]

[Effect of the Invention] If the emergency call which shows that the positional information of two or more terminals which acquire a user's living body data was supervised, and abnormalities were in living body data from one of terminals is received according to this invention Since it is considering as the urgent correspondence approach which chooses another terminal which is near the terminal concerned, and carries out the line connection of the terminal which called in emergency dial, and the selected terminal based on the positional information of the terminal concerned By talking so that another user connected until it could connect the user whom emergency generated, and another user who is present in near and the ambulance arrived may encourage the user who lapsed into emergency There is no need that a monitor central site operator talks by being devoted to one user, and correspondence of another emergency call can be carried out, and it is effective in the ability to perform quick and efficient

correspondence by low cost, without increasing the number of operators.

[0079] Moreover, if the emergency call which shows that the positional information of two or more terminals which acquire a user's living body data was supervised, and abnormalities were in living body data from one of terminals is received according to this invention Since it is considering as the urgent correspondence approach which makes the multiple selection of another terminal which is near the terminal concerned, and connects the terminal which called in emergency dial, and two or more selected terminals in a \*\* person coincidence line of contact based on the positional information of the terminal concerned The probability for the selected terminal to be connected is raised and there is effectiveness which can raise possibility of performing efficient correspondence.

[0080] Moreover, according to this invention, it is the urgent correspondence system equipped with the monitor center connected through the terminal which acquires a user's living body data, a terminal, a PHS line network, or a cellular-phone line network. When abnormalities are in the living body data which the terminal acquired, it is the terminal which calls a monitor center in emergency dial through a PHS line network or a cellular-phone line network. If a monitor center supervises the positional information of two or more terminals and receives an emergency call from one of terminals Based on the positional

information of a terminal, the multiple selection of another terminal which is near the terminal concerned is made. If the demand which connects the terminal which called in emergency dial to the PHS line network or the cellular-phone line network, and two or more selected terminals in a \*\* person coincidence line of contact is outputted and a PHS line network or a cellular-phone line network receives the demand from a monitor center Since it is considering as the urgent correspondence system which connects the terminal which called in emergency dial, and two or more selected terminals in a \*\* person coincidence line of contact By talking so that another user connected until it could connect the user whom emergency generated, and another user who is present in near and the ambulance arrived may encourage the user who lapsed into emergency There is no need that a monitor central site operator talks by being devoted to one user, and correspondence of another emergency call can be carried out, and it is effective in the ability to perform quick and efficient correspondence by low cost, without increasing the number of operators.

[0081] Moreover, according to this invention, if a monitor center receives an emergency call, it is based on the positional information of the terminal concerned. Make the multiple selection of another terminal which is near the terminal concerned, and the demand which connects the terminal which called in emergency dial to the PHS line network or the cellular-phone line network, two

or more selected terminals, and a monitor center in a \*\* person coincidence line of contact is outputted. If a PHS line network or a cellular-phone line network receives the demand concerned from a monitor center. It is considering as the urgent correspondence system which connects the terminal which called in emergency dial, two or more selected terminals, and a monitor center in a \*\* person coincidence line of contact. If there is need, a monitor central site operator can also join a \*\* person coincidence message, and when the condition of the user who lapsed into emergency changes, it is effective in the ability to respond promptly.

[0082] moreover , since a terminal be consider as the urgent correspondence system which ask for the stress level which be equip with a means measure the frequency of a voiceprint and show extent of stress based on frequency change of the measured voiceprint , and transmit a stress level to a monitor center with living body data according to this invention , the data in which the state of stress of the user who lapsed into emergency be show can also offer , and it be effective in the ability of an operator or a medical practitioner to be able to support the still more suitable thing which judge and direct .

[0083] Moreover, according to this invention, it asks for the stress level a terminal indicates extent of stress to be based on frequency change of the measured voiceprint. Living body data and a stress level are periodically

transmitted to a monitor center. A monitor center Memorize as a database the living body data and the stress level which were received for every terminal, draw the life rhythm of the user of the terminal concerned based on it, and the living body data and stress level, and life rhythm which newly received are compared. Since it is considering as the urgent correspondence system which predicts emergency generating by condition change of the user concerned Living body data and a stress level are supervised and it asks for a user's life rhythm, before comparing the life rhythm and received data, predicting condition change of a user and lapsing into a serious state of emergency, suitable measures can be taken, and there is effectiveness which prevents emergency.

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## DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1] It is the outline configuration explanatory view of the urgent response system concerning the gestalt of operation of this invention.

[Description of Notations]

1 -- Wearing terminal 2 -- Monitor center 3 -- PHS system 21 -- Urgent response means 22 -- Database 4 -- Fire department 5 -- Police station 6 -- Care exchange

center 7 -- Emergency hospital 8 -- Probe